

Grade 9 The Line

① $y = mx + b$ slope / y int

$$m = \frac{y_2 - y_1}{x_2 - x_1} \quad \text{rise over run}$$

② $ax + by = c$ - mixtures
- two variable

③ $Ax + By + C = 0$ STANDARD FORM

Feb 2-1:37 PM

Sony is selling television for \$500

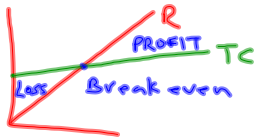
It costs a set up fee of \$10,000 and each TV costs \$250 in material. How many TVs must they sell to break even?

$y_1 = 500x$ Revenue

$y_2 = 250x + 10000$ Total Cost

Break Even $y_1 = y_2$

Feb 2-2:08 PM



Feb 2-2:14 PM

$y_1 = y_2$

$500x = 250x + 10000$

$500x - 250x = 10000$

$$\frac{250x}{250} = \frac{10000}{250}$$

$x = 40$

At 40 TVs Sony will break even. Before they lose money, after 40 TVs they make a profit.

Feb 2-2:16 PM

Grade 10

① Linear Systems

② Quadratics

③ Trigonometry

Feb 2-2:20 PM

Quadratics

① Vertex Form $y = a(x-h)^2 + k$

② Zeros- Factored Form $y = a(x-s)(x-t)$

③ $ax^2 + bx + c = 0$ — Standard Form

Feb 2-2:22 PM

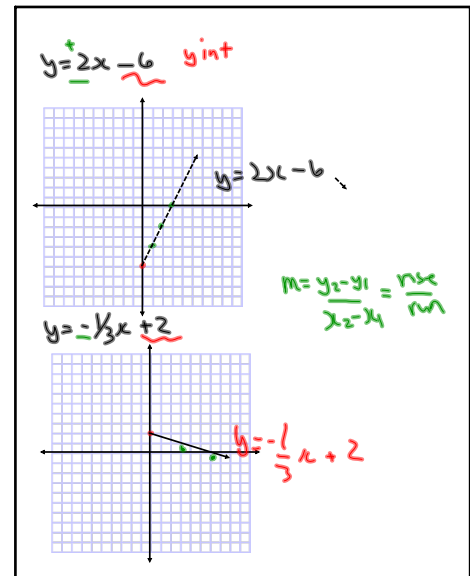
Linear Equations

Graphing Using Slope/yint

$$y = 2x - 6$$

$$y = -\frac{1}{3}x + 2$$

Feb 3-1:34 PM



Feb 3-9:47 AM

Graph

- ① $y = x^2$
- ② $y = -2x^2$
- ③ $y = (x-2)^2$
- ④ $y = x^2 - 6$
- ⑤ $y = -2(x+2)^2$
- ⑥ $y = 2x^2 + 3$
- ⑦ $y = -\frac{1}{4}x^2$
- ⑧ $y = 2(x+2)^2 + 3$

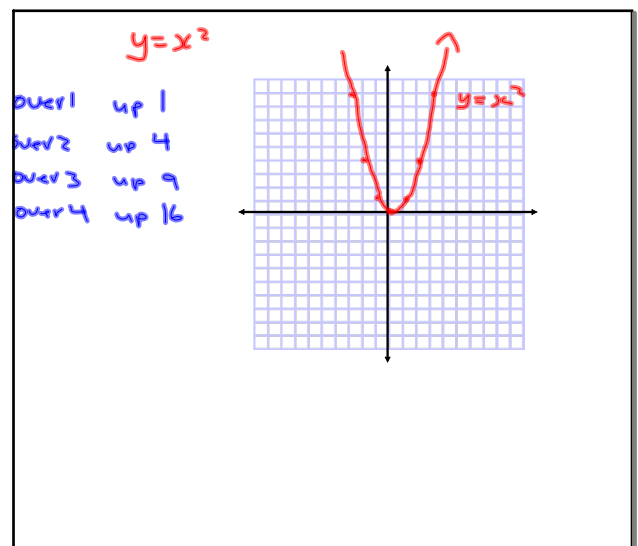
$y = a(x-h)^2 + k$

$a =$ skinny or wide

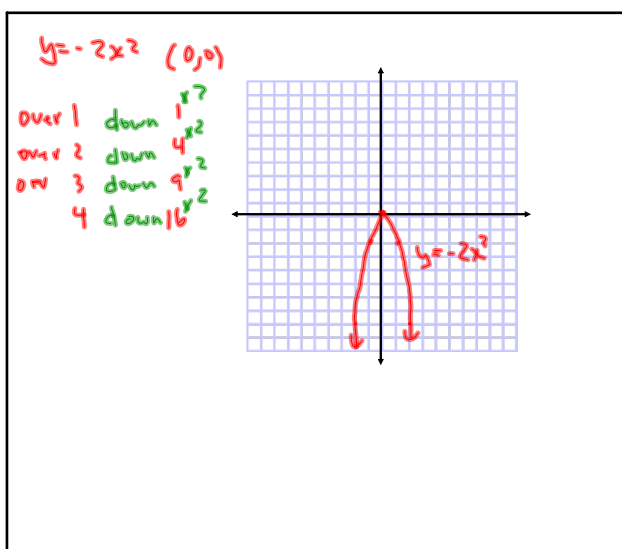
$h =$ left/right

$k =$ up/down

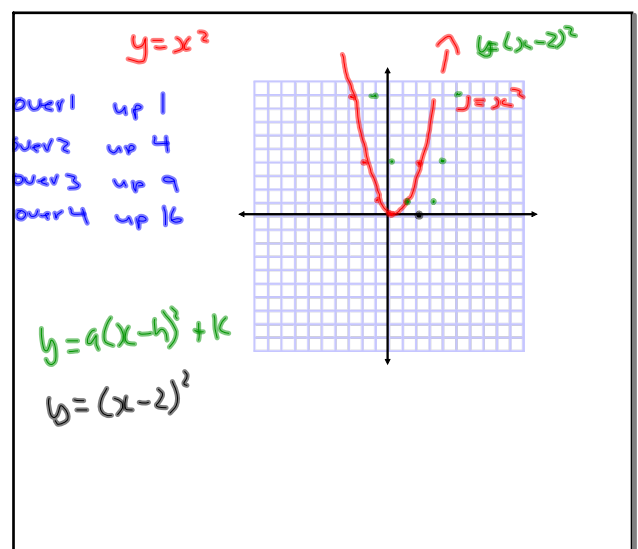
Feb 2-2:26 PM



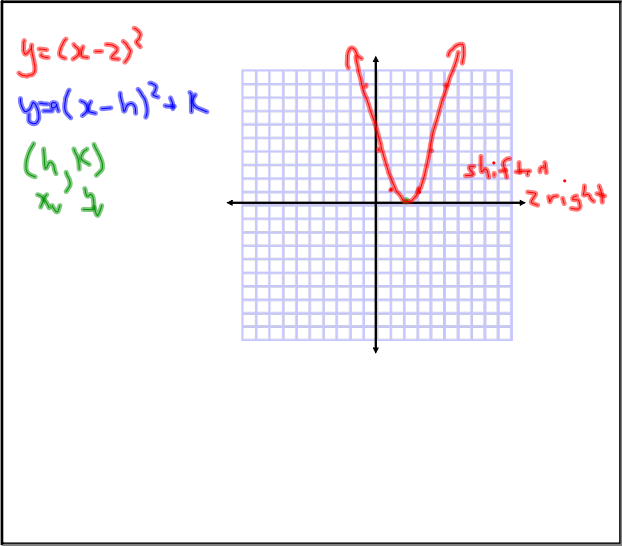
Feb 3-9:47 AM



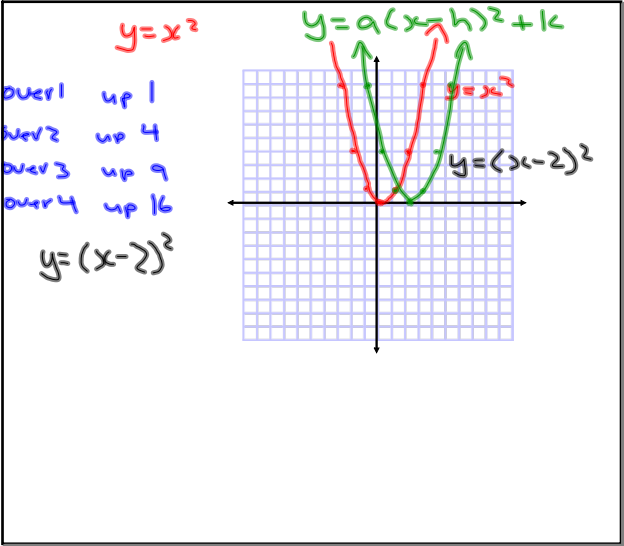
Feb 3-9:47 AM



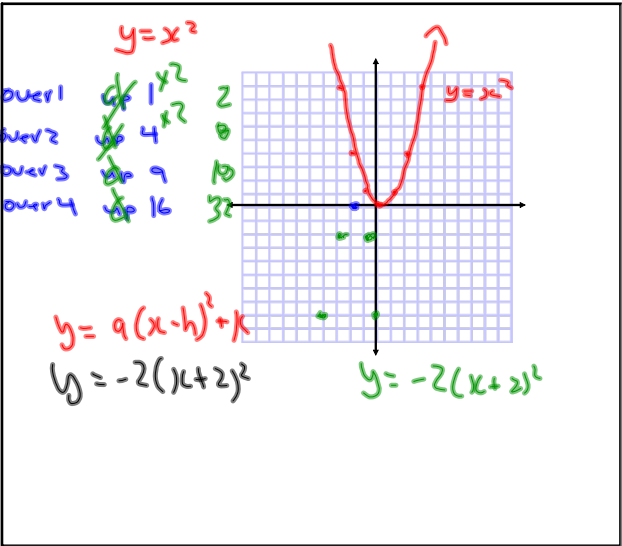
Feb 3-9:47 AM



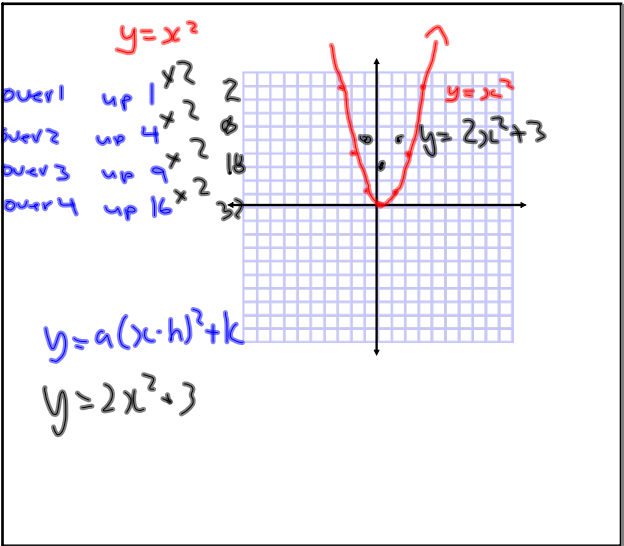
Feb 3-9:47 AM



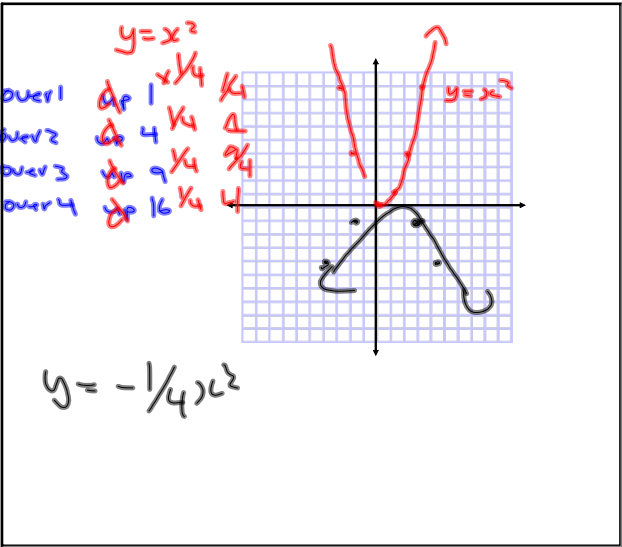
Feb 3-9:47 AM



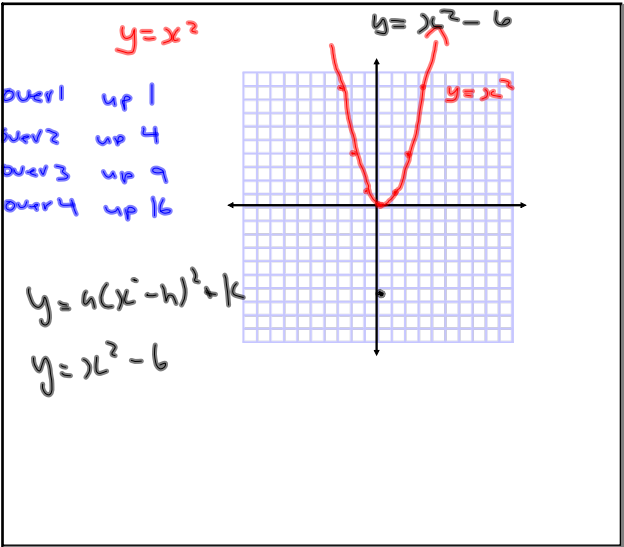
Feb 3-9:47 AM



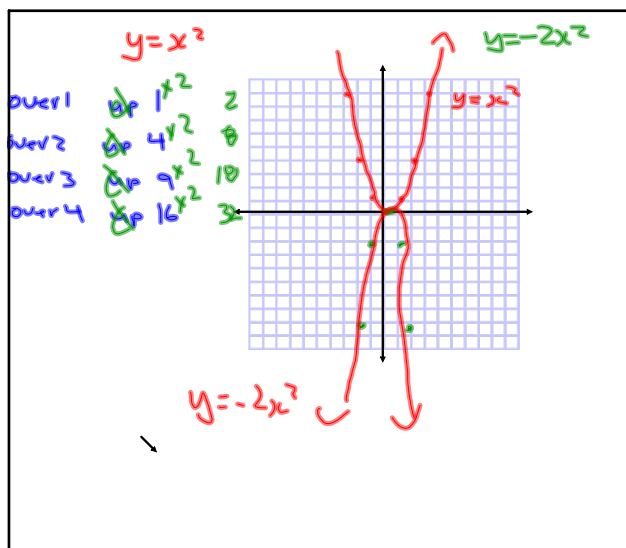
Feb 3-9:47 AM



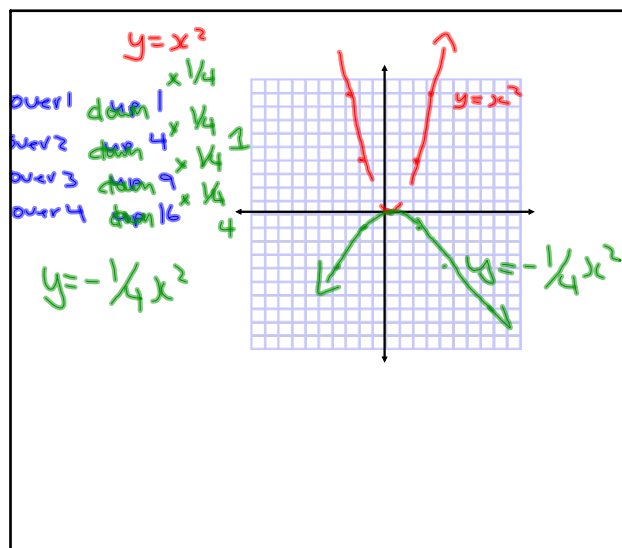
Feb 3-9:47 AM



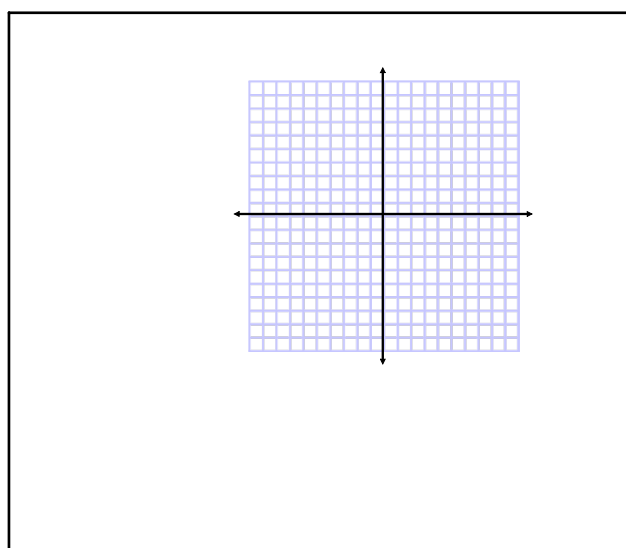
Feb 3-9:47 AM



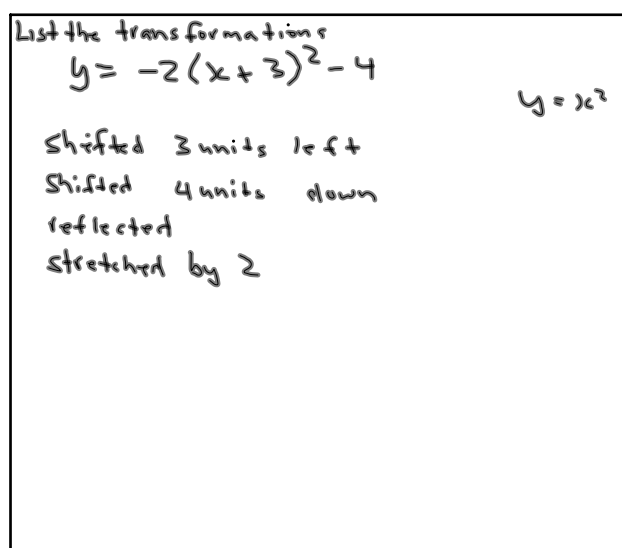
Feb 3-9:47 AM



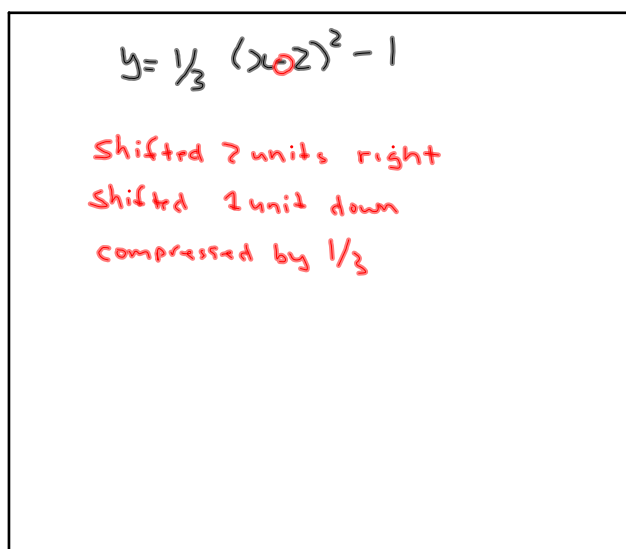
Feb 3-9:47 AM



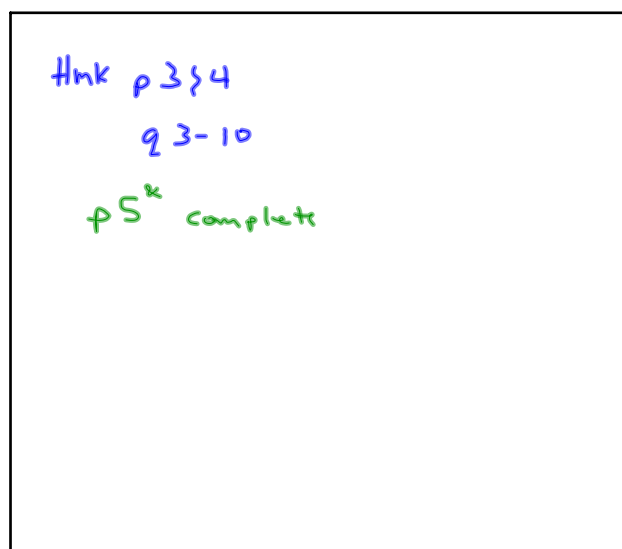
Feb 3-9:47 AM



Feb 3-10:16 AM



Feb 3-2:06 PM



Feb 3-2:11 PM